STATE OF HAWAII
DEPARTMENT OF HEALTH

Tularemia: Frequently Asked Questions

What is tularemia?
Tularemia is an infectious disease caused by a hardy bacterium, *Francisella tularensis*, that is found in animals (especially rodents, rabbits, and hares).

How do people become infected with the tularemia bacteria?
Typically, persons become infected through the bites of arthropods (most commonly, ticks and deerflies) that have fed on an infected animal, by handling infected animal carcasses, by eating or drinking contaminated food or water, or by inhaling infected aerosols.

Does tularemia occur naturally in the United States?
Yes. Tularemia is a widespread disease in animals. Approximately 200 cases of tularemia in humans are reported annually in the United States, mostly in persons living in the south-central and western states. Nearly all cases occur in rural areas and are associated with the bites of infected ticks and biting flies or with the handling of infected rodents, rabbits, or hares. Occasional cases result from inhaling infectious aerosols and from laboratory accidents. There has never been a case reported in Hawaii.

Why are we concerned about tularemia as a bioweapon?
Francisella tularensis is highly infectious: a small number of bacteria (10-50 organisms) can cause disease. If *F. tularensis* were used as a bioweapon, the bacteria would likely be made airborne for exposure by inhalation. Persons who inhale an infectious aerosol would generally experience severe respiratory illness, including life-threatening pneumonia and an infection that spreads throughout the body, if they were not treated. The bacteria that cause tularemia occur widely in nature and could be isolated and grown in quantity in a laboratory, although manufacturing an effective aerosol weapon would require considerable sophistication.

Can someone become infected with the tularemia bacteria from another person?
No. People have not been known to transmit the infection to others, so infected persons do not need to be isolated.

How quickly would someone become sick if they were exposed to the tularemia bacteria?
The incubation period for tularemia is typically three to five days, but can take up to 14 days.

What are the signs and symptoms of tularemia?
Depending on the route of exposure, the tularemia bacteria may cause sores in the mouth or on the skin, swollen and painful lymph glands, inflamed eyes, sore throat, or pneumonia. If the bacteria were inhaled, symptoms would include the abrupt onset of fever, chills, headache, muscle aches, joint pain, dry cough, and progressive weakness. Persons with pneumonia can develop chest pain, difficulty breathing, bloody sputum, and respiratory failure. Forty percent or more of persons with the lung and systemic forms of the disease may die if they are not treated with appropriate antibiotics.

What should someone do if they suspect they or others have been exposed to the tularemia bacteria?
Seek prompt medical attention. If a person has been exposed to *Francisella tularensis*, treatment with tetracycline antibiotics for 14 days after exposure may be recommended.

Local and state health departments should be immediately notified so disease investigation and control activities can begin quickly. If the exposure is thought to be due to criminal activity (bioterrorism), local and state health departments will notify CDC, the FBI, and other appropriate authorities.

How is tularemia diagnosed?
When tularemia is clinically suspected, the healthcare worker will collect specimens, such as blood or sputum, from the patient for testing in a diagnostic or reference laboratory.

Presumptive (preliminary) test results for tularemia may take less than two hours, but confirmatory testing will take longer, usually 24 to 48 hours.

Can tularemia be effectively treated with antibiotics?
Yes. After potential exposure or diagnosis, early treatment is recommended with antibiotics. The Strategic National Stockpile (SNS) is a national supply of antibiotics vaccine and medical/surgical items that can be rapidly sent to the site of a public health emergency. This vaccine would be distributed to those in need free of charge.

How long can *Francisella tularensis* exist in the environment?
Francisella tularensis can remain alive for weeks in water and soil.

Is there a vaccine available for tularemia?

In the past, a vaccine for tularemia has been used to protect laboratory workers,

but it is currently not available because it is under review by the Food and Drug Administration.